

As filed with the Securities and Exchange Commission on August 2, 2002

Registration No. 033-58810

**SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549**

**POST-EFFECTIVE AMENDMENT NO. 1
TO
FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

POTOMAC ELECTRIC POWER COMPANY
(Exact name of registrant as specified in its charter)

District of Columbia and Virginia
(State or other jurisdiction
of incorporation)

53-0127880
(I.R.S. Employer
Identification No.)

**701 Ninth Street, NW
Washington, D.C. 20068**
(Address, including zip code, of registrant's principal executive offices)

Ellen Sheriff Rogers
Secretary and Assistant Treasurer
Potomac Electric Power Company
701 Ninth Street, N.W.
Washington, D.C. 20068
(202) 872-3526
(Name, address and telephone number, including area code, of agent for service)

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. []

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, please check the following box. []

This Post-Effective Amendment No. 1 is being filed to amend the registration statement (the "Registration Statement") on Form S-3 (File No. 33-58810), pursuant to which Potomac Electric Power Company (the "Registrant") registered 4,000,000 shares of its common stock, \$1.00 par value ("Pepco Common Stock") for offer and sale pursuant to the Potomac Electric Power Company Shareholder Dividend Reinvestment Plan (the "DRP").

On August 1, 2002, in accordance with an Agreement and Plan of Merger, dated as of February 9, 2001, among the Registrant, New RC, Inc., now named Pepco Holdings, Inc. ("Pepco Holdings"), and Conectiv, the Registrant and Conectiv combined their businesses by merging with acquisition subsidiaries of Pepco Holdings (the "Merger"). As a result of the Merger, the Registrant and Conectiv each have become subsidiaries of Pepco Holdings and the outstanding shares of Pepco Common Stock were converted in the right to receive shares of Pepco Holdings common stock. In connection with the Merger, the DRP is being terminated and is being replaced with a Pepco Holdings, Inc. Shareholder Dividend Reinvestment Plan.

In accordance with its undertaking in the Registration Statement to remove from registration, by means of a post-effective amendment, any of the registered securities that remain unsold at the termination of the offering, the Registrant hereby amends the Registration Statement to remove from registration all shares of Pepco Common Stock that remained unsold at the time of the Merger.

SIGNATURES

The Registrant. Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing this Post- Effective Amendment No. 1 on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Washington, District of Columbia, on the 1st day of August 2002.

POTOMAC ELECTRIC POWER COMPANY

By: JOHN M. DERRICK, JR.
John M. Derrick, Jr.
Chairman of the Board

Pursuant to the requirements of the Securities Act of 1933, this Post-Effective Amendment No. 1 to the Registration Statement has been signed below by the following person in the capacities indicated.

Signature	Title	Date
<u>JOHN M. DERRICK, JR.</u> John M. Derrick, Jr.	Chairman of the Board (principal executive officer)	August 1, 2002
<u>D. R. WRAASE</u> Dennis R. Wraase	Chief Executive Officer and Director	August 1, 2002
<u>WILLIAM J. SIM</u> William J. Sim	President, Chief Operating Officer and Director	August 1, 2002
<u>A. W. WILLIAMS</u> Andrew W. Williams	Senior Vice President, Chief Financial Officer and Director (principal financial officer)	August 1, 2002

JAMES P. LAVIN
James P. Lavin

Vice President and Controller
(principal accounting officer)

August 1, 2002

T. S. SHAW
Thomas S. Shaw

Director

August 1, 2002

W. T. TORGERSON
William T. Torgerson

Director

August 1, 2002